

Appendix K

Implementation Table for the Utah Aquatic Invasive Species Management Plan

(NOTE: Plan implementation is entirely dependant upon sufficient budget being available.)

Purpose: Develop and document a program and associated protocols to be implemented for AIS management within Utah.

Goal (I): Improve the ability of natural resource management entities within Utah to prevent invasion of AIS into the state, and to contain AIS through accepted management practices to areas that are either already infested or become infested.

Outreach Objective (A): The Utah AIS Management Plan will establish and increase outreach efforts directed at public education. The intent is to cause Utah's public, particularly the media, governmental agencies, outdoor-associated recreational organizations, boaters, and anglers to realize the threats and impacts from AIS, and become partners in AIS education, interdiction, decontamination, and management.

Media Strategy (1): Coordinate Utah's media (national, regional, statewide and local newspapers, magazines, radio stations and television stations), including targeted programming ("Utah at Your Leisure" and "Roughin It Outdoors") to repeatedly tell the AIS story, by identifying opportunity for the media to market their publications and broadcasts, promoting the "Stop Aquatic Hitchhikers" slogan in combination with Utah's decontamination protocols.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Coordinate marketing of proactive media articles (# IA1a)	Promote proactive AIS stories to the media--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Coordinate marketing of reactive media articles (# IA1b)	Promote reactive AIS stories to the media--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Public Education Strategy (2): Educate the public, particularly Utah boaters, at a variety of venues (e.g. organized angler and boater meetings, International Sportsman Expo, Greenspan Boat Show, Garden Show, state and county fairs, launch sites and Utah's Ports of Entry) about AIS. The process will be to explain the AIS issue, and encourage the public to spread the "word," creating peer pressure for decontamination compliance. This strategy also includes presentations to natural resource management agencies within Utah and across the west about the AIS issue.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Conduct AIS education with agencies and groups (# IA2a)	Present and explain the AIS story statewide to tribal, federal, state & local governments, and sportsman groups--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Conduct AIS education at expos & fairs (# IA2b)	Present and explain the AIS story statewide at expos, shows & fairs--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Conduct AIS education at boat launch sites (# IA2c)	Present and explain the AIS story statewide at boat launch ramps--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Conduct AIS education for international natural resource managers (# IA2d)	Present and explain Utah's AIS program worldwide to other natural resource management entities--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Educational Venue Strategy (3): Pursue cooperative opportunities to expand the education strategy to venues statewide like the Living Aquarium and their educational van (they visit schools in the Wasatch Front area of Utah), Hogle Zoo and their docent education program (they visit schools statewide), and the Utah Natural History Museum.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Conduct AIS education at aquariums, zoos & museums (# IA3a)	Explore cooperative opportunity at other educational venues statewide to present and explain the AIS story--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Education Products Strategy (4): Display AIS outreach product produced by Utah Division of Wildlife Resource statewide (e.g. highway billboards, tailgate wraps on UDWR trucks, boat launch ramps, water-based recreation areas, boat dealers and marine repair shops, restaurants, local dive shops, and sporting good stores).

Note: Cabela's and Sportsman Warehouse outlets are each willing and have facilities that can be used for public AIS presentations.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Conduct AIS education via display of outreach product (# IA4a)	Develop & display outreach product statewide at every conceivable location in order to stimulate public recognition & reaction to the AIS problem--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Water User Education Strategy (5): Pursue opportunity to make AIS presentations at venues where water user groups gather (e.g. Utah Water Users Conference, river basin meetings, water rights managers meeting, etc.).

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Conduct AIS education of water users (# IA5a)	Develop presentations & displays about AIS, presenting them statewide at gatherings of water users or natural resource managers who regulate water users--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Next Generation Education Strategy (6): Coordinate with Utah's educators in concurrence with the state science coordinator to educate the next generation of boaters by developing formalized in-class-room tutorials for secondary level school teachers to present to their students. The educational content must correlate to Utah's core curriculum and be done in cooperation with Project WILD.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Conduct AIS education for the next generation Education-secondary school students & their teachers (# IA6a)	Consistent with the Utah Board of Education's core curriculum and in cooperation with Project WILD, develop presentations & educational product about AIS for use statewide by secondary school teachers--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Web Site Education Strategy (7): This strategy also includes web site development for AIS message delivery, and the sharing of educational material amongst educators, the Utah AIS Task Force and other states.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Develop & maintain a suitable web site to present AIS information (# IA7a)	Coordinate with UDWR's web master for appropriate web site development to present the AIS story and make available associated educational material to Utah's public--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

University Education Strategy (8): Coordinate with appropriate local university and college personnel to make AIS presentations to their students, either in classroom settings or as a visiting lecturer at organized symposiums.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Develop educational material for use by university teachers & students (# IA8a)	Develop presentations & educational product about AIS for use statewide by university educators or by professional ecologists as visiting lecturers--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Interdiction and Decontamination Objective (B): The Utah AIS Management Plan will facilitate increased interdictions of boats and equipment contaminated with AIS, requiring decontamination under authority of the Utah Aquatic Invasive Species Interdiction Act and Rule R657-60 Aquatic Invasive Species Interdiction in order to control the spread of AIS.

Interdiction Strategy (1): Utah Division of Wildlife Resources' staff, including authorized volunteers, Utah Peace Officers, which includes Conservation Officers and state Park Rangers, and Utah Department of Transportation Port of Entry Agents, under authority of the Utah Aquatic Invasive Species Interdiction Act and Rule R657-60 Aquatic Invasive Species Interdiction, and other properly trained natural resource management personnel, will interdict boats at launch ramps, administrative check sites, and Utah's Ports of Entry to detect boats and equipment contaminated with AIS.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Interdict boats or other equipment and inspect for AIS (# IB1a)	Statewide, interdict boats and equipment potentially contaminated with AIS at launch ramps, administrative check sites, and Utah's Ports of Entry--yearlong	UDWR & Peace Officers & Port of Entry Agents	UDWR & Peace Officers & Port of Entry Agents	X	X	X	X	X

Decontamination Strategy (2): Boat owners and operators will be contacted in-the-field or at a variety of other venues, including through media publications or broadcasts, one-on-one education or at group presentations, in order to tutor them about AIS. The boaters will be provided guidance about how to decontaminate their watercraft and equipment as per established protocols.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Decontaminate boats or other equipment as needed (# IB2a)	Statewide, decontaminate boats and equipment contaminated with AIS at launch ramps, administrative check sites, and Utah's Ports of Entry, or other places of opportunity--yearlong	UDWR & Peace Officers & Port of Entry Agents	UDWR & Peace Officers & Port of Entry Agents	X	X	X	X	X
Promote Do-It-Yourself and Professional Decontaminations (# IB2b)	Statewide, educate boaters and others about how to decontaminate their potentially AIS infested equipment using an approved do-it-yourself method or an approved professional method--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Change boater behavior regarding decontamination (# IB2c)	Statewide, encourage boaters to routinely decontaminate their equipment after every boating trip--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Management Objective (C): The Utah AIS Management Plan will facilitate opportunity to apply contemporary natural resource management practices in order to regulate, control and eradicate AIS, allowing rehabilitation of infested areas followed by documented monitoring of success in all phases of management.

Plan Development Strategy (1): Utah Division of Wildlife Resources will prepare, implement and maintain a Utah Aquatic Invasive Species Management Plan, including periodic updates as scientific information evolves regarding AIS management, in concurrence with the Utah Aquatic Invasive Species Task Force and the U.S. Fish and Wildlife Service's national Aquatic Nuisance Species Task Force.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Development & maintain an AIS management plan for Utah (# IC1a)	Develop, implement and maintain an approved AIS management plan for the state of Utah--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Public Review Strategy (2): Utah Division of Wildlife Resources subjected the draft Utah Aquatic Invasive Species Management Plan to a public review process that included Utah Division of Wildlife Resources' five Regional Advisory Councils located throughout Utah, approval by the Utah Wildlife Board (Appendix G). Once approved by the Utah Wildlife Board occurred, approval by the Utah Governor's Office was secured. Then, ultimate approval by the U.S. Fish and Wildlife Service's national Aquatic Nuisance Species Task Force ensued.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Coordinate public review of Utah's AIS plan (# IC2a)	Conduct a thorough, statewide public review of the Utah AIS Management Plan; after 5 years of implementation do it again in FY2014, modifying the plan as needed	UDWR & AIS Task Force	UDWR & AIS Task Force	X				

Implementation Strategy (3): Utah Division of Wildlife Resources will work with Utah's Department of Natural Resources, Utah's Legislature, the Utah AIS Task Force and other natural resource management entities to secure adequate funding and cooperation for plan implementation and continuance.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Secure sufficient budget to implement Utah's AIS plan (# IC3a)	Yearlong, coordinate with decision makers across Utah and the Utah AIS Task Force in order to secure and maintain sufficient budget to conduct the Utah AIS Management Plan	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Manage AIS budget (# IC3b)	Yearlong, monitor and manage the budgets associated with the Utah AIS Management Plan	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Coordinate the Utah AIS Task Force (# IC3c)	Yearlong, coordinate statewide with the Utah AIS Task Force and partner agencies or groups in order to implement the Utah AIS Management Plan	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Coordinate the AIS program within UDWR--personnel work plans (# IC3d)	Yearlong, coordinate within Utah Division of Wildlife Resources for development of annual performance management contracts for personnel assigned to the AIS effort	UDWR	UDWR	X	X	X	X	X

Research and Technology Strategy (4): Utah Division of Wildlife Resources has already contacted Utah State University's Fish and Wildlife Department to assess early detection methodologies, particularly biological arrays using protein markers for identification. Additionally multiple researchers at various labs have been queried about the multiple, different deoxyribonucleic acid polymerase chain reaction tests (PCR) that are available. Further research may evolve based upon findings, need and available funds. It is intended that funds will be secured to maintain a long-term graduate research effort at Utah State University to be directed toward AIS issues.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Coordinate research institutions in Utah to do AIS research as needed (# IC4a)	Yearlong, coordinate with Utah's research institutions, including the Fish Experiment Station in Logan, UT; working labs across the nation; and others to further early detection efforts and protective measures for AIS	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Maintain a significant literacy regarding existing and new literature about AIS (# IC4b)	Yearlong, perpetually pursue the scientific literature, sharing information to better the Utah AIS Task Force's understanding of AIS issues and management potentials for AIS	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Control and Restoration Strategy (5): The control of AIS is problematic to the extent that all the different species require varying approaches. For some species control or containment methods are poorly understood, although interest across the world is high, so research is ongoing. Findings from that research will be implemented as appropriate and practicable in Utah. The strongest control approach is to simply focus upon keeping AIS out of Utah or contained to areas already infested.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Coordinate a program to keep AIS out of Utah or contained to infested sites (# IC5a)	Yearlong, focus statewide upon approaches that will keep AIS from either arriving in Utah or for those that have already arrived, keep them contained to infested areas	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Compell compliance with Utah's self-certification program for boaters (# IC5b)	Compel boaters statewide to self-certify prior to launch that their watercraft have either not been used within the last 30 days on an AIS infested water or that their watercraft have been properly decontaminated--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Coordinate development of control plans as a rapid response to <i>Dreissenid</i> problems (# IC5c)	In regards to <i>Dreissenid</i> mussels, coordinate statewide the development of control plans for rapid response at every boatable water prior to the mussells arrival or spread--yearlong	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Coordinate development of control plans as a rapid response to AIS problems (# IC5d)	Yearlong, coordinate statewide the development of control plans for a rapid response to deal with newly arriving or spreading AIS	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

Coordinate restoration activity following control efforts for AIS (# IC5e)	Upon implementation of a control plan for a rapid response, follow through to ensure that impacted biota are restored and that suitable mitigation ensues	UDWR AIS Task Force	& UDWR AIS Task Force	X	X	X	X	X
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Monitoring and Evaluation Strategy (6): Monitoring for invasions of AIS or spread of existing AIS is a significant challenge as compared to monitoring and evaluation for control and restoration work. Utah AIS Task Force members and agencies will keep track of invasions of AIS or spread of existing AIS, documenting change in conditions annually.

Action/Task #	Description/Title	Lead Agency	Funding Source	Occurrence for Planned Effort				
				FY09	FY10	FY11	FY12	FY13
Monitor & evaluate arrival or spread of AIS (# IC6a)	Yearlong, monitor using appropriate methodology for arrival or spread of AIS statewide, particularly priority 1 and 2 AIS groups, and document findings, comparing findings to previous investigations.	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Coordinate acquisition of plankton samples as early detection of <i>Dreissenids</i> (# IC6b)	In regards to <i>Dreissenid</i> mussels, secure plankton samples from every boatable water when water temperatures are appropriate for reproduction and analyze as per UDWR protocol	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Perpetually assess the effectiveness of Utah's AIS plan (# IC6c)	Yearlong, evaluate the effectiveness of the Utah AIS Management Plan, particularly the rapid response strategy and modify as needed	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X
Coordinate preparation of an annual AIS program activities report (# IC6d)	During December of each year, prepare a summary report of outcome for conduct of the Utah AIS Management Plan and distribute/present as appropriate (e.g, Utah AIS Task Force, U.S. Fish and Wildlife Service Aquatic Nuisance Species Task Force, Western Association of Fish and Wildlife Agencies, Utah Legislature, etc.)	UDWR & AIS Task Force	UDWR & AIS Task Force	X	X	X	X	X

